

Amer. Land Shells, 1885, p. 114, description only; not the figures.

Mesodon devius var. W. G. B., op. cit., p. 119, fig. 88.

Triodopsis harfordiana W. G. Binney, Bull. M. C. Z. XIII, pt. 2, p. 37, pl. 1, figs. 6, 7.

Helix salmonensis Tryon, Man. of Conch. III, p. 147 (Sept. 2, 1887).

Helix commutanda Ancey. Conchologists' Exchange, II, p. 79 (December, 1887).

Salmon River Mountains, Idaho, collected by Henry Hemphill.

Binney's figured holotype is no. 11116 A. N. S. P. This specimen becomes also type of *salmonensis* and *commutanda*.

Tryon also proposed the new name *Helix binominata* for *Triodopsis hemphilli* W. G. Binney; but as the latter was not a homonym, as he supposed, that change was superfluous.

**INTERESTING FACTS IN THE HISTORY OF UNIO ORBICULATUS
HILDRETH AND U. ABRUPTUS SAY**

BY L. S. FRIERSON

Under the name of *Unio orbiculatus* Hildreth Dr. R. E. Call minutely described the *Unio abruptus* Say in the Mollusca of Indiana (1900), and figured the latter on plate 50 of the same work. Dr. Call observed (*Ibid.*, p. 493), that Hildreth and the "earlier naturalists" seemed to have considered his species as closely akin to the short and thick variety of the *Unio ligamentinus* Lamarck found in the Ohio.

Notwithstanding that perhaps almost every student of the North American naiades would agree with the above, there are involved in it no less than three separate errors. Firstly, Hildreth knew nothing of the *Unio crassus* Say, but only knew the quite different conception of "crassus" had by Mr. Barnes! Secondly, the "earlier naturalists" did not consider Hildreth's species as being at all closely related to either the *crassus* of Say nor to that of Barnes!

With one accord, Say, Conrad, Ferussac (and other lesser lights), placed Hildreth's species in the synonymy of the *Unio subrotunda* Rafinesque. Dr. Lea, who was ever on the alert to

save his own names, rescued his name of *Unio circulus* by placing Hildreth's *orbiculatus* in the synonymy of the closely allied *Unio torsus* Rafinesque, in his first list of American *Unio* (1829).

But Say died in 1834, and two years later Dr. Lea issued his first Synopsis of the Naiades (1836), and in this work he changed his placement of Hildreth's species, giving it as the antecedent of *Unio abruptus* Say.

Because of the absence of Say, and the practical inaccessibility of Hildreth's description, the last, *but by no means the best*, guess of Lea has been accepted ever since.

In the work cited of Call (p. 493) the description given by Hildreth was said to be "repeated", but by some miscue, perhaps the most important portions of the original were omitted in the reprint!

The writer will not undertake to copy Hildreth's description, since the greater part of it applies as well to any *Unio*, but will merely cite a few of the original criteria, showing how impossible its identification as being the *Unio abruptus* Say is. Since Hildreth (in common with Barnes and others) mistook the "anterior for the posterior", such portions of his observations as embrace this conception will be changed to suit modern usage.

"Shell nearly round; inflated; length 2.5, altitude 2.5, diameter 1.75." The critical student will note that the above corresponds *exactly* with some specimens of the ("*U. torsus*"), modern *Obovaria retusa* Lamarck, but absolutely not with any *Unio abruptus* Say thus far recorded!

"Posterior lunule broad heart shaped". Here again we have a feature often to be seen in the *retusa*, but a "broad heart shaped" posterior view of the *abruptus* has yet to be seen. It might be well to note also, that the above observation carries with it the implicit statement, that the beaks of the species are "incurved"—a feature often seen in *retusa* but scarcely in the other.

"Beaks somewhat prominent; projecting forward". It is scarcely worth while calling the attention of the reader to the direction in which the above observation leans.

"Cardinal teeth elevated, angulated, deeply sulcated". As

to the cardinal teeth of "*abruptus*", Call himself (ibid. page 492) writes that they are "nearly smooth", in which he is correct. Those of the "*retusa*", the reader may prove by inspection of several, are in fact, remarkably "sulcated".

"Nacre flesh color, and very iridescent with purple and violet". Such coloring in the *abruptus* has never been seen by the writer, but applies very well to some specimens of the *retusa*. The nacre of the latter is generally said to be "deep purple", but it is sometimes white, and sometimes with a blush of pink; especially when young.

An attentive reading of Hildreth's description will show that his shell was correctly placed by the earlier naturalists—for it must be remembered that the several species called *subrotunda*, *torsus* etc., might have been lumped together by them. Say at any rate never mentioned the *torsus* or *retusa* in any of his writings.

Whether Hildreth's species be the *subrotunda* or the *retusa* is merely of academic interest; the facts which interest us being that it is absolutely *not* Say's species, *Unio abruptus*; and the latter name, after resting in the synonymy for almost a hundred years, must be used as the valid name of what has been incorrectly called *Unio orbiculatus* Hildreth.

GAYLE, LOUISIANA.

NOTES ON THE ANATOMY AND TAXONOMY OF CERTAIN LAMPSILINAE
FROM THE GULF DRAINAGE

BY A. E. ORTMANN, PH. D.

(Continued from page 105)

8. MICROMYA VANUXEMENSIS UMBRANS (Lea) (1857).

See: *Lampsilis propria* and *umbrans*=*vanuxemensis*, Simpson, 1914, p. 105 and 103.

E. vanuxemensis, of the Cumberland-Tennessee-system, has also been reported from the upper Coosa drainage. The following accepted synonyms are from this region.

U. umbrans (=umbrosus), Lea, 1857. A typical female in shape, with dark brown epidermis and dark purple nacre.—Othcalooga Creek, Gordon Co., Ga.